

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT We make Indiana a cleaner, healthier place to live.

Frank O'Bannon Governor

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100 North Senate Avenue P. O. Box 6015 Indianapolis, Indiana 46206-6015 (317) 232-8603 (800) 451-6027 www.IN.gov/idem

August 15, 2003

Ms. Cathy Clegg General Motors Corporation, MFD, Marion Plant P.O. Box 778 Marion, IN 46952-0036

> 053-17617 Re:

> > First Minor Permit Modification to Part 70 No.: T 053-6852-00004

Dear Ms. Clegg:

General Motors Corporation, MFD, Marion Plant was issued a permit on January 19, 1999 for an automotive metal parts source. A letter requesting changes to this permit was received on April 17, 2003. Pursuant to the provisions of 326 IAC 2-7-12 a minor permit modification to this permit is hereby approved as described in the attached Technical Support Document.

The modification consists of converting the one (1) coal fired boiler, identified as UT-002, to burn natural gas with No. 2 fuel oil as back-up.

The changes in the Part 70 Operating Permit are documented in the Technical Support Document. All other conditions of the permit shall remain unchanged and in effect. Please attach a copy of this modification and the following revised permit pages to the front of the original permit.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact REVIEWER, c/o OAQ, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, at 631-691-3395 ext. 19 or in Indiana at 1-800-451-6027 (ext 631-691-3395).

Sincerely,

Original signed by Paul Dubenetzky Paul Dubenetzky, Chief Permits Branch Office of Air Quality

Attachments CJF/MES

File - Grant County CC:

U.S. EPA, Region V

Grant County Health Department

Air Compliance Section Inspector -Marc Goldman

Compliance Branch - Karen Nowak Administrative and Development

Technical Support and Modeling - Michelle Boner



Indiana Department of Environmental Management

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PART 70 OPERATING PERMIT OFFICE OF AIR QUALITY

General Motors Corporation, MFD, Marion Plant 2400 West Second Street Marion, Indiana 46952

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 and 326 IAC 2-1-3.2 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Operation Permit No.: T053-6852-00004

Issued by:
Janet G. McCabe, Assistant Commissioner
Office of Air Management

Issuance Date: January 19, 1999

Expiration Date: January 19, 2004

First Administrative Amendment 053-13552-00004, issued January 4, 2001 First Reopening 053-13296-00004, issued January 3, 2002 Second Administrative Amendment 053-15368-00004, issued April 1, 2002 First Minor Source Modification 053-17156-00004, pending

First Minor Permit Modification No.:
053-17617-00004

Pages Affected: 3,4,26,26a,28,30,31,31a,34a,36

Issued by:Original signed by Paul Dubenetzky
Paul Dubenetzky, Branch Chief
Office of Air Quality

Pages Affected: 3,4,26,26a,28,30,31,31a,34a,36

Issuance Date: August 15, 2003

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Certification

Emergency/Deviation Occurrence Report Natural Gas-Fired Boiler Certification Quarterly Report Quarterly Compliance Monitoring Report

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SECTION A

SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

The Permittee owns and operates an automotive metal parts source.

Responsible Official: Cathy Clegg

Source Address: 2400 West Second Street, Marion, Indiana 46952

Mailing Address: P.O. Box 778, Marion, Indiana 46952

SIC Code: 3465 County Location: Grant

County Status: Attainment for all criteria pollutants

Source Status: Part 70 Permit Program

Major Source, under PSD Rules;

Minor Source, Section 112 of the Clean Air Act

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source consists of the following emission units and pollution control devices:

- (1) One (1) natural gas fired boiler, identified as UT-001, rated at 72 MMBtu/hr, and exhausting to stack 1.
- One (1) natural gas fired boiler, firing No. 2 fuel oil as back-up, identified as UT-002, rated at 96 MMBtu/hr, exhausting to stack 2.
- (3) One (1) spreader stoker coal-fired boiler, identified as UT-003, rated at 96 MMBtu/hr, using a multiple cyclone w/o fly ash reinjection for particulate control, and exhausting to stack 3.
- One (1) air atomized spray paint booth, identified as MT-001, used for maintenance painting, equipped with dry filter to control overspray, and exhausting to stack 4.

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

This stationary source also includes the following insignificant activities which are specifically regulated, as defined in 326 IAC 2-7-1(21):

- (1) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour.
- (2) Fuel oil-fired combustion sources with heat input equal to or less than two million (2,000,000) Btu per hour and firing fuel containing less than five-tenths (0.5) percent sulfur by weight.
- (3) Equipment powered by internal combustion engines of capacity equal to or less than 500,000 Btu per hour, except where total capacity of equipment operated by one stationary source exceeds 2,000,000 Btu per hour.

- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAM, on or before the date it is due.
- (d) Unless otherwise specified in this permit, any quarterly report shall be submitted within thirty (30) days of the end of the reporting period.
- (e) All instances of deviations as described in Section B- Deviations from Permit Requirements Conditions must be clearly identified in such reports.
- (f) Any corrective actions or response steps taken as a result of each deviation must be clearly identified in such reports.
- (g) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period.

The documents submitted pursuant to this condition do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Stratospheric Ozone Protection

C.22 Compliance with 40 CFR 82 and 326 IAC 22-1

Pursuant to 40 CFR 82 (Protection of Stratospheric Ozone), Subpart F, except as provided for motor vehicle air conditioners in Subpart B, the Permittee shall comply with the standards for recycling and emissions reduction:

- (a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to 40 CFR 82.156.
- (b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.
- (c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

Part 2 MACT Application Submittal Requirement

- C.23 Application Requirements for Section 112(j) of the Clean Air Act [40 CFR 63.52(e)] [40 CFR 63.56 (a)] [40 CFR 63.9(b)] [326 IAC 2-7-12]
 - (a) The Permittee shall submit a Part 2 MACT Application in accordance with 40 CFR 63.52 (e)(1). The Part 2 MACT Application shall meet the requirements of 40 CFR 63.53(b).
 - (b) Notwithstanding paragraph (a), the Permittee is not required to submit a Part 2 MACT Application if the Permittee no longer meets the applicability criteria of 40 CFR 63.50 by the application deadline in 40 CFR 63.52(e)(1). For example, the Permittee would not have to submit a Part 2 MACT Application if, by the application deadline:
 - (1) The source is no longer a major source of hazardous air pollutants, as defined in 40 CFR 63.2:
 - (2) The source no longer includes one or more units in an affected source category for which the U.S. EPA failed to promulgate an emission standard by May 15, 2002; or

- (3) The MACT standard or standards for the affected source categories included at the source are promulgated.
- (c) Notwithstanding paragraph (a), pursuant to 40 CFR 63.56(a), the Permittee shall comply with an applicable promulgated MACT standard in accordance with the schedule provided in the MACT standard if the MACT standard is promulgated prior to the Part 2 MACT Application deadline or prior to the issuance of permit with a case-by-case Section 112(j) MACT determination. The MACT requirements include the applicable General Provisions requirements of 40 CFR 63, Subpart A. Pursuant to 40 CFR 63.9(b), the Permittee shall submit an initial notification not later than 120 days after the effective date of the MACT, unless the MACT specifies otherwise. The initial notification shall be submitted to:

Indiana Department of Environmental Management Compliance Data Section, Office of Air Quality 100 North Senate Avenue, P.O. Box 6015 Indianapolis, Indiana 46206-6015

and

United States Environmental Protection Agency, Region V Director, Air and Radiation Division 77 West Jackson Boulevard Chicago, Illinois 60604-3590

SECTION D.1

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

- (1) One (1) natural gas fired boiler, identified as UT-001, rated at 72 MMBtu/hr, and exhausting to stack 1.
- One (1) natural gas fired boiler, firing No. 2 fuel oil as back-up, identified as UT-002, rated at 96 MMBtu/hr, exhausting to stack 2.
- One (1) spreader stoker coal-fired boiler, identified as UT-003, rated at 96 MMBtu/hr, using a multiple cyclone w/o fly ash reinjection for particulate control, and exhausting to stack 3.

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.1 Particulate Matter (PM) [326 IAC 6-2-3]

Pursuant to 326 IAC 6-2-3 (Particulate Matter Emission Limitations for Sources of Indirect Heating), the PM emissions from each of the three boilers UT-001, UT-002 and UT-003, shall be limited to 0.482 pounds per MMBtu heat input.

The limitation is based on the following equation:

$$Pt = \frac{C * a * h}{76.5 * Q^{0.75} * N^{0.25}}$$

Where: C = Maximum ground level concentration with respect to distance from the point source at the "critical" wind speed for level terrain. This shall equal 50 micrograms per cubic meter for a period not to exceed a sixty minute time period.

Pt = Pounds of particulate matter emitted per million Btu heat input (lb/mmBtu).

Q = Total source maximum operating capacity rating in mmBtu/hr heat input.

N = Number of stacks in fuel burning operation.

a = Plume rise factor which is used to make allowance for less than theoretical plume rise. The value 0.67 shall be used for Q less than or equal to 1,000 mmBtu/hr heat input.

h = Stack height in feet.

D.1.2 Sulfur Dioxide (SO2) [326 IAC 7-1.1-1][326 IAC 7-2-1]

- (a) Pursuant to 326 IAC 326 7-1.1 (Sulfur Dioxide Emission Limitations), the SO2 emissions from the one (1) boiler UT-003, shall not exceed 6.0 pounds per MMBtu heat input.
- (b) Pursuant to 326 IAC 7-1.1 (SO2 Emissions Limitations) the SO2 emissions from the one (1) ninety six (96.0) MMBtu per hour natural gas and No. 2 fuel oil-fired boiler, identified UT-002, shall not exceed five tenths (0.5) pounds per MMBtu heat input, when burning No. 2 fuel oil. Pursuant to 326 IAC 7-2-1, compliance shall be demonstrated on a calendar month average.

D.1.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and any control devices.

A determination of noncompliance pursuant to either of the methods specified in (a), (b), or (c) above shall not be refuted by evidence of compliance pursuant to the other method.

D.1.6 Sulfur Dioxide Emissions and Sulfur Content

For the one (1) natural gas and No. 2 fuel oil-fired boiler, identified UT-002, compliance shall be determined utilizing one of the following options, when burning No. 2 fuel oil.

- (a) Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate that the sulfur dioxide emissions do not exceed five-tenths (0.5) pounds per million Btu heat input by:
 - (1) Providing vendor analysis of fuel delivered, if accompanied by a vendor certification; or
 - (2) Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.
 - Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and
 - (4) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling.
- (b) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the ninety six (96.0) MMBtu per hour boiler using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.

A determination of noncompliance pursuant to any of the methods specified in (a) or (b) above shall not be refuted by evidence of compliance pursuant to the other method.

D.1.7 Particulate Matter

The mechanical multicyclone for PM control shall be in operation at all times when the boilerUT-003 is in operation.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.1.8 Particulate Matter (PM)

- (a) Daily visible emission notations (non-Method 9) of the coal fired boiler, identified as UT-003, stack exhaust shall be performed during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.
- (b) Visible emission notations of the one (1) natural gas fired boiler, firing No. 2 fuel oil as back up, identified as UT-002, stack exhaust shall be performed once per shift during normal daylight operations while combusting fuel oil. A trained employee shall record whether emissions are normal or abnormal.
- (c) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (d) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (e) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(f) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

D.1.9 Multicyclone Inspections

- (a) An inspection shall be performed weekly of the ductwork and annually of the mechanical multicyclone controlling the particulate matter emission from the one (1) one boiler UT-003, when this boiler is in operation.
- (b) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.1.10 Record Keeping Requirements

- (a) To document compliance with Conditions D.1.1, D.1.2, and D.1.5, the Permittee shall maintain records in accordance with (1) through (4) below. Records maintained for (1) through (4) shall be taken monthly and shall be complete and sufficient to establish compliance with the PM and SO2 emission limits established in D.1.1, D.1.2, and D.1.5.
 - (1) Calendar dates covered in the compliance determination period;
 - (2) Actual coal usage since last compliance determination period;
 - (3) Sulfur content, heat content, and ash content;
 - (4) Sulfur dioxide emission rates.
- (b) To document compliance with Conditions D.1.2 and D.1.6, the Permittee shall maintain records in accordance with (1) through (5) below. Records maintained for (1) through (5) shall be taken monthly and shall be complete and sufficient to establish compliance with the SO₂ emission limits established in Conditions D.1.2 and D.1.6.
 - (1) Calendar dates covered in the compliance determination period;
 - (2) Actual fuel oil usage since last compliance determination period and equivalent sulfur dioxide emissions;

If the fuel supplier certification is used to demonstrate compliance, when burning alternate fuels and not determining compliance pursuant to 326 IAC 3-7-4, the following, as a minimum, shall be maintained:

- (3) Fuel supplier certifications;
- (4) The name of the fuel supplier; and
- (5) A statement from the fuel supplier that certifies the sulfur content of the fuel oil.
- (c) To document compliance with Conditions D.1.8 and D.1.9 the Permittee shall maintain records of daily visible emission notations, weekly inspections of the multicylcone ductwork and annual inspections of the multicyclone.
- (d) All records shall be maintained in accordance with Section C General Record Keeping Requirements, of this permit.

D.1.11 Reporting Requirements

(a) A quarterly summary of the information to document compliance with Conditions D.1.1 and D.1.2 shall be submitted to the address listed in Section C - General Reporting

Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.

(b) The natural gas boiler certification shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or its equivalent, within thirty (30) days after the end of the six (6) month period being reported. The natural gas-fired boiler certification does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY **COMPLIANCE DATA SECTION**

PART 70 OPERATING PERMIT SEMI-ANNUAL NATURAL GAS FIRED BOILER CERTIFICATION

Source Name: General Motors Corporation, MFD, Marion Plant 2400 West Second Street, Marion, IN 46952 Source Address:

Mailing Address: P.O. Box 778, Marion, IN 46952

Part 70 Permit No.: T 053-6852-00004

0

Facilities: Boilers UT-001 and UT-002

9 Natural Gas Only 9 Alternate Fuel burned
From: To:
I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
Signature:
Printed Name:
Title/Position:
Phone:
Date:

A certification by the responsible official as defined by 326 IAC 2-7-1(34) is required for this report.

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INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name:	General Motors Corporation, MMF, Marion Plant
Source Address:	2400 West Second Street, Marion, IN 46952
Mailing Address:	D O Poy 779 Marion IN 46052

Mailing Address: P.O. Box 778, Marion, IN 46952 Part 70 Permit No.: T053-6852-00004

Facility: Boiler UT-003

Parameter: SO2

Limit: 6.0 pounds per MMBtu heat input

Month	Coal Usage (tons)	Monthly Average Sulfur Content (%)	Monthly Average Ash Content (%)	Monthly Average Heat Content (MMBtu/lb)	SO2 Emission Rate (Ibs/MMBtu)
1					
2					
3					
Deviations					

9	No deviation occurred in this quarter.				
9	Deviation/s occurred in this quarter. Deviation has been reported on:				

Indiana Department of Environmental Management Office of Air Quality

Technical Support Document (TSD) for Part 70 Minor Source and Minor Permit Modifications

Source Background and Description

Source Name: General Motors Corporation, MFD, Marion Plant Source Location: 2400 West Second Street, Marion, Indiana 46952

County: Grant SIC Code: 3465

Operation Permit No.: T 053-6852-00004
Operation Permit Issuance Date: January 19, 1999
Minor Source Modification No.: 053-17156-00004
Minor Permit Modification No.: 053-17617-00004
Permit Reviewer: Craig J. Friederich

The Office of Air Quality (OAQ) has reviewed a modification application from General Motors Corporation, MFD, Marion Plant relating to the conversion of their existing coal fired boiler, identified as UT-002, to a natural gas fired boiler with No. 2 fuel oil as back-up.

History

On April 9, General Motors Corporation, MFD, Marion Plant submitted an application to the OAQ requesting to convert their existing coal fired boiler, identified as UT-002, to a natural gas fired boiler with No. 2 fuel oil as back-up. Pursuant to 326 IAC 2-1.1-1(13), the conversion of the coal fired boiler to a natural gas fired boiler, with No. 2 fuel oil as back-up, is considered a pollution control project. The conversion is not considered a reconstruction because the cost is less than fifty percent (50%) of the cost of a new boiler, and the source is switching to an inherently less polluting fuel. Pursuant to 326 IAC 2-7-10.5(d)(3), modifications involving a pollution control project as defined in 326 IAC 2-1.1-1(13) that do not increase the potential to emit PM₁₀ greater than or equal to fifteen (15) tons per year or any other regulated pollutant greater than the thresholds in 326 IAC 2-7-10.5(d) (4), shall be processed as a Minor Source Modification. This modification does not increase the potential to emit of any pollutant greater than the thresholds listed in 326 IAC 2-7-10.5(d)(4), therefore, this modification is considered Minor. There will be no significant changes in the compliance monitoring and record keeping requirements of the operating permit, therefore, the permit modification is also Minor, pursuant to 326 IAC 2-7-12(b).

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Commissioner that the Part 70 Minor Source and Minor Permit Modifications be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

Minor Source Modification: 053-17156-00004 Minor Permit Modification: 053-17617-00004

An application for the purposes of this review was received on April 9, 2003. Additional information was received on May 8 and May 9, 2003.

Emission Calculations

See pages 1 through 4 of 4 of Appendix A of this document for detailed emissions calculations.

Change In Potential To Emit Due To Modification

Pursuant to IAC 2-1.1-1(13), the conversion of the coal fired boiler to natural gas with No. 2 fuel oil as back up is considered a pollution control project. Therefore, the change in potential to emit of the conversion is evaluated. The change in the potential to emit of all criteria pollutants is shown in the table below:

Pollutant	Potential to Emit of coal fired 96 million Btu per hour boiler	Potential to Emit after change to natural gas and No. 2 fuel oil fired 96 million Btu/hour boiler (Worst case)	Change in the PTE.
PM	1,217	9.91	-1207
PM10	243	9.91	-233
SO2	2,102	213	-1889
NOx	203	60.1	-143
VOC	1.00	2.31	1.31
СО	92.0	35.3	-56.7

Note: The potential to emit from the coal fired boiler was provided by the source using AP-42 emission factors (tables 1.1.3, 1.1.4, and 1.1.19 dated 9/98). The potential to emit from the boiler firing natural gas is from AP-42, table 1.4.1 and 1.4.2. dated 7/98, and the potential to emit from the boiler on No. 2 fuel oil is based on AP-42 tables 1.3-1, 1.3-2, and 1.3-3, dated 9/98.

The Part 70 Operating Permit is being modified through a Part 70 Minor Source Modification. This modification is being performed pursuant to 2-7-10.5(d)(3), because the modification involves a pollution control project and does not cause an increase in the potential to emit of any criteria pollutant greater than the thresholds in 326 IAC 2-7-10(d)(4). The proposed operating conditions shall be incorporated into the Part 70 Operating Permit as a Minor Permit Modification (MPM 053-17617-00004) in accordance with 326 IAC 2-7-12(b)(1). The Minor Permit Modification will give the source approval to operate the converted emission unit.

County Attainment Status

The source is located in Grant County.

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Pollutant	Status
PM ₁₀	attainment
SO ₂	attainment
NO ₂	attainment
Ozone	attainment
СО	attainment
Lead	attainment

- (a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Grant County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (b) Grant County has been classified as attainment or unclassifiable for all remaining criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (c) Fugitive Emissions
 Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2
 and since there are no applicable New Source Performance Standards that were in effect
 on August 7, 1980, the fugitive PM emissions are not counted toward determination of PSD
 and Emission Offset applicability.

Source Status

Existing Source PSD or Emission Offset Definition (emissions after controls, based upon 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/year)
PM	greater than 250
PM ₁₀	greater than 250
SO ₂	greater than 250
VOC	less than 100
СО	greater than 250
NO _x	greater than 250

HAPs	Potential To Emit (tons/year)
Single HAP	greater than 10
Combined HAPs	greater than 25

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(a) This existing source is a major stationary source because an attainment regulated pollutant is emitted at a rate of two hundred fifty (250) tons per year or more, and it is not one of the 28 listed source categories.

(b) These emissions are based upon the Technical support document for T 053-6852-00004.

Potential to Emit of Modification After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the significant emission units after controls. The control equipment is considered federally enforceable only after issuance of this Part 70 source modification.

Pollutant	PM (tons/yr)	PM ₁₀ (tons/yr)	SO ₂ (tons/yr)	VOC (tons/yr)	CO (tons/yr)	NO _X (tons/yr)
Proposed Modification(Future PTE)	9.91	9.91	213	2.31	35.3	60.1
Contemporaneous Decreases (Past Actual, 2001 and 2002)	35.3	23.0	335.4	0.10	14.7	32.4
Net Emissions	-25.4	-13.1	-122	2.21	20.6	27.7
PSD Significant Level	25	15	40	40	100	40

This modification to an existing major stationary source is not major because the emissions increase is less than the PSD significant levels, and this change is considered a pollution control project. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

Federal Rule Applicability

- (a) This minor permit modification does not involve a pollutant-specific emissions unit as defined in 40 CFR 64.1 for all criteria pollutants.
 - (1) with the potential to emit before controls equal to or greater than the major source threshold for PM_{10} , VOC, CO, and NO_x ;
 - (2) that is subject to an emission limitation or standard for SO₂; and
 - (3) uses a control device as defined in 40 CFR 64.1 to comply with that emission limitation or standard.

Therefore, the requirements of 40 CFR 64, Compliance Assurance Monitoring, are not applicable to this modification.

(b) The one (1) natural gas fired boiler, firing No. 2 fuel oil as back-up, identified as UT-002, is not subject to the requirements of the New Source Performance Standard, 326 IAC 12, (40 CFR 60.40c, Subpart Dc), because the conversion from coal to natural gas and No. 2 fuel oil does not constitute a modification as defined in 40 CFR 60.2. This conversion does not increase the amount of any air pollutant to which a standard applies. The source is

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changing the fuel that can be burned at their existing boiler. This existing boiler is not being replaced by a new boiler.

- (c) There are still no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20, 40 CFR 61 and 40 CFR Part 63) applicable to this proposed modification.
- (d) The requirements of Section 112(j) of the Clean Air Act (40 CFR Part 63.50 through 63.56) are applicable to this source because the source is a major source of HAPs (i.e., the source has the potential to emit ten (10) tons per year or greater of a single HAP or twenty-five (25) tons per year or greater of a combination of HAPs) and the source includes one or more units that belong to one or more source categories affected by the Section 112(j) Maximum Achievable Control Technology (MACT) Hammer date of May 15, 2002.
 - (1) This rule requires the source to:
 - (A) Submit a Part 1 MACT Application by May 15, 2002; and
 - (B) Submit a Part 2 MACT Application within twenty-four (24) months after the Permittee submitted a Part 1 MACT Application.
 - (2) The Permittee submitted a Part 1 MACT Application on May 6, 2002. Therefore, the Permittee is required to submit the Part 2 MACT Application on or before May 6, 2004. Note that on April 25, 2002, Earthjustice filed a lawsuit against the US EPA regarding the April 5, 2002 revisions to the rules implementing Section 112(j) of the Clean Air Act. In particular, Earthjustice is challenging the US EPA's 24-month period between the Part 1 and Part 2 MACT Application due dates. Therefore, the Part 2 MACT Application due date may be changed as a result of the suit. Based on a proposed settlement published in the August 26, 2002 Federal Register, it appears that US EPA intends to revise the rule so that the due date of the Part 2 MACT Application will be within twelve (12) months after the Permittee submitted the Part 1 MACT application.
 - (3) Pursuant to 40 CFR 63.56(a), the Permittee shall comply with an applicable promulgated MACT standard in accordance with the schedule provided in the MACT standard if the MACT standard is promulgated prior to the Part 2 MACT Application deadline or prior to the issuance of permit with a case-by-case Section 112(j) MACT determination. The MACT requirements include the applicable General Provisions requirements of 40 CFR 63, Subpart A. Pursuant to 40 CFR 63.9(b), the Permittee shall submit an initial notification not later than 120 days after the effective date of the MACT, unless the MACT specifies otherwise. The MACT and the General Provisions of 40 CFR 63, Subpart A will become new applicable requirements, as defined by 326 IAC 2-7-1(6), that must be incorporated into the Part 70 permit. After IDEM, OAQ receives the initial notification, any of the following will occur:
 - (A) If three or more years remain on the Part 70 permit term at the time the MACT is promulgated, IDEM, OAQ will notify the source that IDEM, OAQ will reopen the permit to include the MACT requirements pursuant to 326 IAC 2-7-9; or
 - (B) If less than three years remain on the Part 70 permit term at the time the MACT is promulgated, the Permittee must include information regarding

the MACT in the renewal application, including the information required in 326 IAC 2-7-4(c); or

The Permittee may submit an application for a significant permit modifica-(C) tion under 326 IAC 2-7-12 to incorporate the MACT requirements. The application may include information regarding which portions of the MACT are applicable to the emission units at the source and which compliance options will be followed.

State Rule Applicability - Individual Facilities

326 IAC 2-2 (Prevention of Significant Deterioration (PSD))

This source is a major source pursuant to 326 IAC 2-2. This modification is a minor modification pursuant to 326 IAC 2-2 because the conversion of the one (1) coal fired boiler, identified as UT-002, is considered a pollution control project. The net emissions from this conversion are also less than the PSD significant levels.

326 IAC 6-2-3 (Emission limitations for sources of indirect heating)

The one (1) natural gas fired boiler, firing No. 2 fuel oil as back-up, identified as UT-002, rated at 96 MMBtu/hr, exhausting to stack 2, was installed in 1956. This boiler was existing and in operation before September 21, 1983. The conversion from coal to natural gas and No. 2 fuel oil does not constitute a construction or reconstruction, therefore, the particulate emissions shall be limited by the following equation:

Pt =
$$\frac{C * a * h}{76.5 * Q^{0.75} * N^{0.25}}$$

Maximum ground level concentration with respect to distance from the point source Where: C= at the "critical" wind speed for level terrain. This shall equal 50 micrograms per cubic meter for a period not to exceed a sixty minute time period.

Pounds of particulate matter emitted per million Btu heat input (lb/mmBtu). Pt =

Q = Total source maximum operating capacity rating in mmBtu/hr heat input.

N = Number of stacks in fuel burning operation.

Plume rise factor which is used to make allowance for less than theoretical plume a = rise. The value 0.67 shall be used for Q less than or equal to 1,000 mmBtu/hr heat input.

h = Stack height in feet.

Pt =
$$\frac{50 * 0.67 * 95}{76.5 * (264)^{.75} * (3)^{.25}}$$

Pt = 0.482 lbs/mmBtu

Based on Appendix A, the worst case potential to emit PM from the one (1) natural gas fired boiler, firing No. 2 fuel oil as back-up, identified as UT-002, is 9.91 tons per year.

 $9.91 \text{ tons/yr} \times (2000 \text{ lbs/ton} / 8760 \text{ hrs/yr}) = 2.26 \text{ pounds/hr}$ (2.26 pounds/hr/96.0 MMBtu/hr) = 0.023 pound PM / MMBtu

Therefore, the (1) natural gas fired boiler, firing No. 2 fuel oil as back-up, identified as UT-002, will comply with this rule.

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326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations)

The potential to emit sulfur dioxide exceeds twenty-five (25) tons per year from the one (1)natural gas fired boiler, firing No. 2 fuel oil as back-up, identified as UT-002. Therefore, this boiler will be subject to 326 IAC 7-1.1. Pursuant to 326 IAC 7-1.1, sulfur dioxide (SO_2) emissions from each boiler when burning No. 2 fuel oil shall be limited to 0.5 pounds per million British thermal units heat input. In order to comply with this limit, the sulfur content of the No. 2 fuel oil shall not exceed 0.5 weight percent.

326 IAC 7-2-1 (Sulfur Dioxide Compliance: reporting and methods to determine compliance)

Reports of calendar month or annual average sulfur content, heat content, fuel consumption, and sulfur dioxide emission rate shall be provided upon request to the Office of Air Quality.

Compliance Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance monitoring requirements applicable to this source are as follows:

The one (1) natural gas fired boiler, firing No. 2 fuel oil as back-up, identified as UT-002, has applicable compliance monitoring conditions as specified below:

Daily visible emissions notations of the boiler stack exhaust shall be performed once per shift during normal daylight operations when exhausting to the atmosphere when burning No. 2 fuel oil. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response Steps, shall be considered a violation of this permit.

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These monitoring conditions are necessary because the boiler must operate properly to ensure compliance with 326 IAC 6-2-3 (Particulate Emissions Limitations for Facilities Constructed before September 21, 1983), and 326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations).

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Proposed Changes

The permit language is changed to read as follows (deleted language appears as strikeouts, new language appears in **bold**):

- A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]
 - (2) One (1) spreader stoker coal-fired natural gas fired boiler, firing No. 2 fuel oil as backup, identified as UT-002, rated at 96 MMBtu/hr, using a multiple cyclone w/o fly ash reinjection for particulate control, and exhausting to stack 2.

Part 2 MACT Application Submittal Requirement

- Application Requirements for Section 112(j) of the Clean Air Act [40 CFR 63.52(e)] [40 CFR 63.56 (a)] [40 CFR 63.9(b)] [326 IAC 2-7-12]
 - The Permittee shall submit a Part 2 MACT Application in accordance with 40 CFR 63.52 (e)(1). The Part 2 MACT Application shall meet the requirements of 40 CFR 63.53(b).
 - Notwithstanding paragraph (a), the Permittee is not required to submit a Part 2 MACT (b) Application if the Permittee no longer meets the applicability criteria of 40 CFR 63.50 by the application deadline in 40 CFR 63.52(e)(1). For example, the Permittee would not have to submit a Part 2 MACT Application if, by the application deadline:
 - (1) The source is no longer a major source of hazardous air pollutants, as defined in 40 CFR 63.2;
 - (2) The source no longer includes one or more units in an affected source category for which the U.S. EPA failed to promulgate an emission standard by May 15, 2002; or
 - (3) The MACT standard or standards for the affected source categories included at the source are promulgated.
 - (c) Notwithstanding paragraph (a), pursuant to 40 CFR 63.56(a), the Permittee shall comply with an applicable promulgated MACT standard in accordance with the schedule provided in the MACT standard if the MACT standard is promulgated prior to the Part 2 MACT Application deadline or prior to the issuance of permit with a case-bycase Section 112(j) MACT determination. The MACT requirements include the applicable General Provisions requirements of 40 CFR 63, Subpart A. Pursuant to 40 CFR 63.9(b), the Permittee shall submit an initial notification not later than 120 days after the effective date of the MACT, unless the MACT specifies otherwise. The initial notification shall be submitted to:

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Indiana Department of Environmental Management Compliance Data Section, Office of Air Quality 100 North Senate Avenue, P.O. Box 6015 Indianapolis, Indiana 46206-6015

and

United States Environmental Protection Agency, Region V Director, Air and Radiation Division 77 West Jackson Boulevard Chicago, Illinois 60604-3590

SECTION D.1

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

One (1) spreader stoker coal-fired natural gas fired boiler, firing No. 2 fuel oil as back-up, identified as UT-002, rated at 96 MMBtu/hr, using a multiple cyclone w/o fly ash reinjection for particulate control, and exhausting to stack 2.

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.1 Particulate Matter (PM) [326 IAC 6-2-3][326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-3 (Particulate Matter Emission Limitations for Sources of Indirect Heating), the PM emissions from each of the two three boilers **UT-001**, UT-002 and UT-003, shall be limited to 0.48**2** pounds per MMBtu heat input.

The limitation is based on the following equation:

Pt =
$$\frac{C * a * h}{76.5 * Q^{0.75} * N^{0.25}}$$

Where: C = Maximum ground level concentration with respect to distance from the point source at the "critical" wind speed for level terrain. This shall equal 50 micrograms per

cubic meter for a period not to exceed a sixty minute time period.

Pt = Pounds of particulate matter emitted per million Btu heat input (lb/mmBtu).

Q = Total source maximum operating capacity rating in mmBtu/hr heat input.

N = Number of stacks in fuel burning operation.

a = Plume rise factor which is used to make allowance for less than theoretical plume rise. The value 0.67 shall be used for Q less than or equal to 1,000 mmBtu/hr heat

input.

h = Stack height in feet.

Pursuant to 326 IAC 6-2-4 (Particulate Matter Emission Limitations for Sources of Indirect Heating), the PM emissions from boiler UT-001, shall be limited to 0.36 pounds per MMBtu heat input. The limitation is based on the following equation:

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$$Pt = \frac{1.09}{0.26}$$

Where: Pt = Pounds of particulate matter emitted per million Btu (lb/mmBtu) heat input.

Q = Total source maximum operating capacity rating in million Btu per hour (mmBtu/hr) heat input. The maximum operating capacity rating is defined as the maximum capacity at which the facility is operated or the nameplate capacity, whichever is specified in the facility's permit application, except when some lower capacity is contained in the facility's operation permit; in which case, the capacity specified in the operation permit shall be used.

D.1.2 Sulfur Dioxide (SO2) [326 IAC 7-1.1-1][326 IAC 7-2-1]

- (a) Pursuant to 326 IAC 326 7-1.1 (Sulfur Dioxide Emission Limitations), the SO2 emissions from each of the two one (2) (1) boilers UT-002 and UT-003, shall not exceed 6.0 pounds per MMBtu heat input.
- (b) Pursuant to 326 IAC 7-1.1 (SO₂ Emissions Limitations) the SO₂ emissions from the one (1) ninety six (96.0) MMBtu per hour natural gas and No. 2 fuel oil-fired boiler, identified UT-002, shall not exceed five tenths (0.5) pounds per MMBtu heat input, when burning No. 2 fuel oil. Pursuant to 326 IAC 7-2-1, compliance shall be demonstrated on a calendar month average.

D.1.6 Sulfur Dioxide Emissions and Sulfur Content

For the one (1) natural gas and No. 2 fuel oil-fired boiler, identified UT-002, compliance shall be determined utilizing one of the following options, when burning No. 2 fuel oil.

- (a) Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate that the sulfur dioxide emissions do not exceed five-tenths (0.5) pounds per million Btu heat input by:
 - (1) Providing vendor analysis of fuel delivered, if accompanied by a vendor certification; or
 - (2) Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.
 - (3) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and
 - (4) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling.
- (b) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the ninety six (96.0) MMBtu per hour boiler using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.

A determination of noncompliance pursuant to any of the methods specified in (a) or (b) above shall not be refuted by evidence of compliance pursuant to the other method.

D.1.67 Particulate Matter

The mechanical multicyclones for PM control shall be in operation at all times when the boilers UT-002 and UT-003 are is in operation.

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D.1.78 Particulate Matter (PM)

Daily visible emission notations (non-Method 9) of the coal fired boilers, identified as UT-(a) 003, stack exhaust shall be performed during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

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- Daily visible emission notations of the one (1) natural gas fired boiler, firing No. 2 fuel (b) oil as back up, identified as UT-002, stack exhaust shall be performed once per shift during normal daylight operations while combusting fuel oil. A trained employee shall record whether emissions are normal or abnormal.
- For processes operated continuously, "normal" means those conditions prevailing, or (bc) expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- In the case of batch or discontinuous operations, readings shall be taken during that part (**cd**) of the operation that would normally be expected to cause the greatest emissions.
- (de) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (ef) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

D.1.89 Multicyclone Inspections

- An inspection shall be performed weekly of the ductwork and annually of the mechanical (a) multicyclones controlling the particulate matter emission from the two one (21) boilers UT-002 and UT-003, when this boiler is in operation. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when a leak or abnormal emissions are observed. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.
- (b) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

D.1.910Record Keeping Requirements

- To document compliance with Conditions D.1.1, D.1.2, and D.1.5, the Permittee shall (a) maintain records in accordance with (1) through (4) below. Records maintained for (1) through (4) shall be taken monthly and shall be complete and sufficient to establish compliance with the PM and SO2 emission limits established in D.1.1 and, D.1.2, and D.1.5.
 - (1) Calendar dates covered in the compliance determination period;
 - Actual coal usage since last compliance determination period; (2)
 - (3) Sulfur content, heat content, and ash content;
 - (4) Sulfur dioxide emission rates.

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(b) To document compliance with Conditions D.1.2 and D.1.6, the Permittee shall maintain records in accordance with (1) through (5) below. Records maintained for (1) through (5) shall be taken monthly and shall be complete and sufficient to establish compliance with the SO₂ emission limits established in Conditions D.1.2 and D.1.6.

- (1) Calendar dates covered in the compliance determination period;
- (2) Actual fuel oil usage since last compliance determination period and equivalent sulfur dioxide emissions:

If the fuel supplier certification is used to demonstrate compliance, when burning alternate fuels and not determining compliance pursuant to 326 IAC 3-7-4, the following, as a minimum, shall be maintained:

- (3) Fuel supplier certifications;
- (4) The name of the fuel supplier; and
- (5) A statement from the fuel supplier that certifies the sulfur content of the fuel oil.
- (b) Pursuant to 326 IAC 3-7-5(a), owners or operators of sources with total coal-fired capacity greater than or equal to one hundred (100) MMBtu per hour actual heat input shall develop a standard operating procedure (SOP) to be followed for sampling, handling, analysis, quality control. Quality assurance and data reporting of the information collected pursuant to 326 IAC 3-7-2 through 326 IAC 3-7-4. In addition, any revision to the SOP shall be submitted to IDEM, OAM.
- (c) To document compliance with Conditions D.1.78 and D.1.89 the Permittee shall maintain records of daily visible emission notations, weekly inspections of the multicylcone ductwork and annual inspections of the multicyclones.
- (d) All records shall be maintained in accordance with Section C General Record Keeping Requirements, of this permit.

D.1.101Reporting Requirements

- (a) A quarterly summary of the information to document compliance with Conditions D.1.1 and D.1.2 shall be submitted to the address listed in Section C General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the guarter being reported.
- (b) The natural gas boiler certification shall be submitted to the address listed in Section C General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or its equivalent, within thirty (30) days after the end of the six (6) month period being reported. The natural gas-fired boiler certification does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

The Quarterly Report Form at the end of the permit has been revised as follows:

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INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name: General Motors Corporation, MMF, Marion Plant Source Address: 2400 West Second Street, Marion, IN 46952

Mailing Address: P.O. Box 778, Marion, IN 46952

Part 70 Permit No.: T053-6852-00004

Facility: Boilers UT-002 and UT-003

Parameter: SO2

Limit: 6.0 pounds per MMBtu heat input

The name of IDEM's "Office of Air Management" was changed to "Office of Air Quality" on January 1, 2001. All references to "Office of Air Management" in the permit have been changed to "Office of Air Quality" and all references to "OAM" have been changed to "OAQ."

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY COMPLIANCE DATA SECTION

PART 70 OPERATING PERMIT SEMI-ANNUAL NATURAL GAS FIRED BOILER CERTIFICATION

Source Name: General Motors Corporation, MFD, Marion Plant Source Address: 2400 West Second Street, Marion, IN 46952

Mailing Address: P.O. Box 778, Marion, IN 46952

Part 70 Permit No.:T 053-6852-00004

Natural Gas Only

Alternate Fuel burned

9

9

Facilities: Boilers UT-001 and UT-002

From: To:
I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
Signature:
Printed Name:
Title/Position:
Phone:
Date:

A certification by the responsible official as defined by 326 IAC 2-7-1(34) is required for this report.

General Motors Corporation, MFD, Marion Plant Marion, Indiana

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Conclusion

This proposed modification shall be subject to the conditions of the attached Part 70 Minor Source Modification No. 053-17156-00004 and Minor Permit Modification 053-17617-00004.